

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of July 12, 2007. The claims are amended as shown. New claims 22-24 are added. No new matter has been added. With this amendment, claims 1-24 are pending in the application.

I. Discussion of the claims and cited references

The present Office Action rejected claims 1, 4-7, 9-16 and 18-21 under 35 U.S.C. § 102(b) as being anticipated by Curran (U.S. Patent No. 5,572,736). Claims 2-3, 8 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Curran in view of Szepesi (U.S. Patent No. 5,680,300). For the reasons set forth below, these rejections are respectfully traversed.

A. Dependent claims 5, 7, 9, 11, 14, 16, 18, and 20

Dependent claims 5, 7, 9, 11, 14, 16, 18, and 20 recite, *inter alia* and using varying language, a finite state machine having a number of internal states equal to a number of sorting patterns. Among these claims, claims 9, 11, 14, 18, and 20 clarify that a finite state machine is located at both the transmission and the reception ends. It is respectfully submitted that these limitations are not met by Curran.

Specifically and with respect to claim 5, for example, the present Office Action has generally asserted that “a model of the algorithm” of Curran meets the limitations of a finite state machine. This assertion is respectfully traversed.

The “model of the algorithm” of Curran cannot be equated to the claimed finite state machines, since for example, finite state machines of one embodiment are actual operational devices, rather than some abstract “model of an algorithm.” For instance, the following definition of a finite state machine is provided by the online computer dictionary at www.whatis.com (emphasis ours):

“In general, a state machine is any device that stores the status of something at a given time and can operate on input to change the status and/or cause an action or output to take place for any given change.”

Accordingly, Curran’s “model of an algorithm” does not meet the limitations for a finite state machine, since his model is not a device and further since he does not provide a finite state machine at both the transmitting and receiving ends (such as recited in claims 9, 11, 14, 18, and 20).

Accordingly, claims 5, 7, 9, 11, 14, 16, 18, and 20 are allowable.

B. Independent claim 1

Independent claim 1 has been amended to recite, *inter alia*, that “a succession of said sorting patterns generated at a transmission end and a succession of sorting patterns generated at a reception end are synchronized with each using a common clock signal.” It is respectfully submitted that a common clock signal to synchronize sorting patterns generated at the transmission and receiving ends are not disclosed, taught, or suggested by the cited references, whether singly or in combination.

For example, Curran does not perform synchronization since he uses a different technique to identify the mapping between a data word to a code word. Specifically, the Abstract of Curran explains that:

“The selected code words is transmitted, together with a switching code, identifying the mapping from which the transmitted code word was generated. At the receiving end of the bus, the switching code is decoded to identify the mapping used in creating the code word. Using the identified mapping, the original data word is recovered.”

Accordingly by providing the “switching code,” Curran does not need to perform synchronization between the code words at the transmission end and the code words at the

reception end. That is, the received switching code identifies the specific mapping that was used to map the data word to the transmitted code word, thereby permitting Curran to recover the original data word.

Thus, claim 1 is allowable over Curran.

Szepesi does not cure the deficiencies of Curran. Szepesi has been cited as allegedly disclosing “synchronization with push pull drive.” However, it is respectfully submitted that Szepesi cannot be combined with Curran to meet the limitations of claim 1.

For example, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

In the present situation, Curran does not need to provide synchronization between his code words, since he transmits a switching code that identifies the mapping between the data word and the selected code word. Adding synchronization to this technique of Curran (in place of or additionally to using his code word would) change the principle of operation of his invention and/or would make his invention operative. Further, it is respectfully submitted that Curran’s use of a switching code to identify the mapping is in fact a teaching against using synchronization, since using a switching code removes the need for a synchronous/timing element that would otherwise be needed to match the code words at the transmission and reception ends.

Accordingly, claim 1 is further allowable over Curran and Szepesi.

C. Other independent claims

Independent claims 8, 12 (rewritten to independent form herein), 13, and 17 are amended to recite, *inter alia* and using varying language, synchronization using a common clock signal. As previously explained above, Curran does not provide synchronization, or more

specifically, does not provide synchronization using a common clock signal. Szepesi cannot be combined with Curran to meet these limitations as well.

Hence, claims 8, 12, 13, and 17 are all allowable.

D. Newly added claims

Independent claim 22 and dependent claims 23-24 have been added. Claim 22 recites, *inter alia*, a transmitter device having a first finite state machine and a second finite state machine at a receiving end. The first finite state machine is synchronized with the second finite state machine by a common clock signal.

As previously explained above, Curran does not provide any finite state machine, such as a finite state machine at both the transmission end and at the receiving end. Moreover, Curran does not provide synchronization between finite state machines using a common clock, since he uses a different technique in which a switching code is sent to the receiving end to identify the mapping between a data word and a particular code word.

Accordingly, claim 22 is allowable over the cited references, whether singly or in combination.

E. Other claim amendments

Various other amendments are made to the claims as shown to provide proper antecedent basis, to provide consistent terminology within and between the claims, to change claim dependency, to revise the format (such as to adjust indentation of paragraphs), to more precisely recite the subject matter contained therein, to remove unnecessary limitations, and/or to otherwise place such claims in better form.

Moreover, claims 1-3, 5-7, and 13-16 are amended to clarify that certain recitations contained therein and in their related claims do not fall within the scope of 35 U.S.C. § 112, sixth paragraph.

II. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.


If the attorney of record (Dennis M. de Guzman) has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. de Guzman at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



Harold H. Bennett II
Registration No. 52,404

DMD:wt

701 Fifth Avenue, Suite 5400
Seattle, Washington 98104
Phone: (206) 622-4900
Fax: (206) 682-6031

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